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## VII.—*Recent Discussions of Grimm's Law.*

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THE Early English Text Society have lately given us an edition of Alfred's translation of Gregory's *Pastorale*, carefully printed from manuscripts of the age of Alfred. It is a book of great value for many reasons. The text makes it possible now to study with confidence the language of Alfred in the minutest points. The introduction is also of value, and the translation, and the notes. They point out with a good deal of care the characteristics of Alfred's English. The editor, Mr. Henry Sweet, is not only an accomplished linguist, and palæographer, but also an earnest phonologist. He began his phonetic career with the study of Mr. Bell's *Visible Speech*, and is in full sympathy with Mr. Bell and Mr. Ellis in their purpose to lay the foundations of the Science of Language in the scientific study of living speech from the physiological side. He has spent a summer studying the Danish pronunciation in the mouths of living Danes, and written a paper on it for the Philological Society, which Mr. Ellis speaks of as "one of the acutest phonological investigations of recent times."

In studying the early manuscripts of Anglo-Saxon, he has been greatly interested in the changes in the spelling, and thinks much light is thrown on the history of speech by his observations. He has studied with special care the history of the lingual spirants, or aspirates, commonly represented in our phonographic systems by *th* and *dh*, and he adds to his edition of the *Pastorale* an essay on this subject, which is also an essay on Grimm's Law. It is a familiar fact that there are two signs in Anglo-Saxon manuscripts for these spirants, one a rune (*p*) called thorn, and the other (*ḥ*) a crossed *d*; and it had been supposed that the first (*p*) originally represented the surd (*th*) heard in *thin*, *path*, and the second (*ḥ*)

the sonant (*dh*) as heard in *thine*, *other*, *smooth*. It was well known that none of the manuscripts had been found to carry out this distinction with any thoroughness, but a prevailing tendency to use *p* at the beginning of words and *ð* in the middle and at the end of words, which is found in the best known manuscripts, was thought to indicate a general habit of the Anglo-Saxon to use the surd sound at the beginning and the sonant in the middle and at the end of words, as is the habit in modern Icelandic. Mr. Sweet's more careful examination of the oldest manuscripts leads him to state that, in each of these, one mode of writing this spirant is used throughout. The very earliest use the Roman letters *th* only. Then *p* and *ð* appear, and some manuscripts have one and some the other. Those of the *Pastorale* have *ð* regularly, initial, medial, and final. The Parker manuscript of the Chronicle, which is of equal antiquity, used only *p*. Isolated examples occur, however, which show that both scribes knew both signs. Mr. Sweet believes that when these manuscripts were written which use but one sign, only one sound existed, and this, he thinks, was the sonant (*dh*). The English surd (*th*), he says, is everywhere a later weakening of the sonant.

It is well known, however, that this letter (*p*, *ð*) corresponds to the surd mute *t* of the Sanskrit, Greek, and Latin, and it is difficult to believe that *t* would change to *dh*. Mr. Sweet admits the difficulty, and meets it by the hypothesis that *t* first changed to *d*, then *d* to *dh*. Both these changes are regular weakenings, and thus far the hypothesis looks fair. But they are inseparably connected with many other changes. What is called Grimm's Law is a formula for a great number of undeniable facts, closely related to each other, and constituting the systems of mutes and their spirants in all the Teutonic tongues. The formula is, "surd mutes change to their aspirates, sonants to their surds, aspirates to their sonants." If the formula be applied to a word in the Parent speech and generally to a word in Sanskrit, Greek, Latin, and the like, it will give the right letters for the corresponding word in Gothic, Anglo-Saxon, or other Low German speech. If it be applied to a word in a Low German speech, it will give the letters for the corresponding word in High German.

It will be noticed in the first application of the law that it is really the Parent Speech which changed to Low German, not Latin, or Greck, or Sanskrit. These are generally like each other, and like the Parent Speech, but not always. In Latin especially there have been great changes among the aspirates. The changes of Grimm's Law are widely anticipated, especially between vowels. But besides this, *th* and *dh* have often, perhaps oftenest, changed to *f*, or with a secondary change, to *b*. We must not try to change *for-is* to *door*, or *ruf-us* or *rub-er* to *red*, but remember *ῥῦπα* and *ἑρὺθ-ρός*, and, if we can, the Sanskrit *rôdh-i-tas*, and replace the original lingual aspirate.

It should be noticed also that words borrowed from other tongues by the Germans are not regularly changed, and that onomatopoe produces similar words in different tongues not historically connected, and prevents words from changing, as *κόκκοξ*, Lat. *cuculus*, Ger. *kuckuck*, cuckoo. These mutes occur also in combinations in which the letter to which they would change is hard to pronounce, and then they do not change, or at least according to the letter of the law. Such are the combinations *nd*, *ld*, *st*, *sp*, *sk*, *ht*, *ft*. These five classes of exceptions, and other exceptions, only serve to establish the law as the expression of a real force, and furnish most desirable data from which to work out the exact nature of the force. Setting them aside for the present, the great body of facts are plain and simple examples under the law; that is, as Grimm states it (*Geschichte der deutschen Sprache*, I. 276):

the sonants	<i>d</i> , <i>b</i> ,	<i>g</i> ,	change into
the surds	<i>t</i> , <i>p</i> ,	<i>k</i> , <i>c</i> ,	which change into
the aspirates	<i>th</i> , <i>ph</i> , <i>f</i> ,	<i>ch</i> , <i>h</i> ,	which change into
the sonants	<i>d</i> , <i>b</i> ,	<i>g</i> .	

If we think out the facts which changes like these imply, it will be clear that at least two sets of changes must have gone on together. Thus, when *d* changes to *t*, if the old *t*'s remain unchanged, there is no reason why the *t*'s which come from *d*, should have a different history from other *t*'s. But we find that words which at first had *d*, now have *t*; while

those which at first had *t*, now have *th*. It is certain that the originally separate and still separate sounds have never been merged into one. When *d* changed to *t*, the old *t* must have changed. Grimm supposed that all three sets of changes went on together. He thought the sounds to be held firmly apart like spokes in a wheel, so that when any one was modified, or moved, the neighbor in whose direction it moved, moved on, and in turn moved the third; and hence he called it *Lautverschiebung*. His theory of it is that the power which turned the wheel was applied to the sonants and gave them the utterance of surds; *d*, for example, was strengthened to *t*, the old *t*'s were moved on to *th*, and the old *th*'s to *d*'s.

Bopp, on the contrary, held it to be a weakening, beginning with the softening of the surds to spirants; *t* to *th*, and so on.

As more exact study of the early tongues went on, a manifold ambiguity in the so-called aspirates became plainer and plainer.

In modern Greek, *δ* and *θ*, and in English, *th*, *dh* are pronounced as spirants, with a simple continuous sound. In India it was found that the Sanskrit *tH*, *dH*, are pronounced as aspirates, nearly like the letters *t* and *h* in our compound *hot-house*, and *d* and *h* in *mad-house*. This sound we shall distinguish from that of the spirants by using a capital *H*. There has been, and is, division of opinion about the real sound of the Sanskrit. Brücke, Max Müller, and others, hold that the aspirate sound just described is impossible, or too difficult to be credible, for the sonants *dH*, *bH*, *gH*: that it must be an invention of the grammarians, and that the real sound was different, perhaps fricative like the German *pf*, *ts*. The set of opinion seems to be in the direction led by G. Curtius, who holds that the aspirate was the real sound. There is also division of opinion on the question whether the originals in the Parent Speech were like the Sanskrit. The Sanskrit has two sets of aspirates, surds *tH*, *kH*, *pH*, and sonants *dH*, *gH*, *bH*, and the German sonant mutes are found in words which in Sanskrit had sonant aspirates, while the corresponding words in Greek have surd. Kuhn and other

weighty authorities hold that the Parent Speech had surd letters, and that the Sanskrit sonants are weakenings from them. They rely mainly on the appearances to Greek, and the physiological argument that regular weakening must be from surds to sonants. Curtius, however, and with him the greatest number of eminent philologists, accept the sonant aspirates *dH*, *bH*, *gH* as the parent letters.

The corresponding letters are as follows :

Sanskrit	<i>dH</i> ,	<i>bH</i> ,	<i>gH</i> .
Greek	$\theta$ ,	$\phi$ ,	$\chi$ .
Latin	<i>f</i> , <i>b</i> , <i>d</i> ,	<i>f</i> , <i>b</i> ,	<i>h</i> , <i>g</i> .
Gothic	<i>d</i> ,	<i>b</i> ,	<i>g</i> .

The Bactrian, Lithuanic, Slavonic, and Celtic are like the Gothic, so that a general set towards the sonants in the Indo-European tongues is plain. The change to surds in Greek and Latin is explained as an irregular assimilation of the sonant *d*, *b*, *g*, by the aspirate *H*. The common movement is a natural weakening by dropping the *H* of *dH*, *bH*, *gH*, which are very difficult sounds to make, and hence originates a very early and very strong tendency to change ; and this, they say, is what turns the wheel and moves all the other letters. This is the theory of Curtius. The prevailing argument for it is that the great majority of the languages are sonant. The Parent Speech being a hypothetical language deduced from the sister families must be expected to agree with the majority.

If one with this thought in mind examines closely the condition of this majority, he is easily led to a fourth theory. It will be seen that in other languages than the Sanskrit, Greek, Latin, and Teutonic, one set of letters, the sonant mutes *d*, *b*, *g*, answers for the two sets *d*, *b*, *g* and *dH*, *bH*, *gH*. In the language of the three theories already given, the original aspirates become merged in the sonants ; but may not these numerous families without the aspirates represent most truly the Parent Speech, and the cultivated families be the ones that have varied from it ? It is the opinion of many phonologists, of Mr. Ellis, for example, and Professor Haldeman, that the Sanskrit aspirates, at least in any pronunciation like

that given them in India, must be dialectic, and are probably late. This opinion would seem to demand some such hypothesis as our question suggests. But grave difficulties arise when we attempt to think it out. If we begin, for instance, with the *d*'s of the Gothic, Slavonic, Celtic, and the like, and suppose them to be the original *d*'s of the Parent Speech, we must then suppose that the Sanskrit, Greek, and Latin have changed a part of their old *d*'s to *dH*, *θ*, *f*. This might be easily believed; but the same words are changed in all three of the languages. This agreement cannot be accidental. There must have been historical connection between these languages when or after the change took place; that is to say, the change must have taken place in the Parent Speech of these three tongues. If it be suggested that the Parent Speech of these three is younger than the Indo-European Parent Speech, and that the change may not go to an earlier common ancestor, a further examination of the Gothic will be necessary. This will show that while the supposed *d* of the Parent Speech is retained in many Gothic words, in many others it has changed to *t*, and it has changed to *t* in just those words which in the other languages retain *d*, and retained *d* in just the words which they change. This again implies historical connection. It brings the Germanic languages into the same inner family with the Sanskrit, Greek, and Latin; that is to say, it implies that the threefold distinction now existing and indicated by *t*, *d*, *th* in English must have existed in the Parent Speech of these four families at least.

It is indeed possible to say, and to believe if there were evidence, that this threefold distinction was first established in one tribe, or one locality, and thence extended as a matter of foreign influence to sister tribes or adjacent localities with which there was much intercourse. The effect of such intercourse has not been much studied. We are coming to it now as the dialects of Germany and England are examined more minutely, and the effects of it promise to be found considerable, and most striking in the modification of pronunciation.

It is also possible that a people might make all these different sounds of each organ, but not discriminate them. There are

many modifications of the *a*-sound in English which we do not notice. Some quality or qualities of a letter are fixed upon as characteristic, the other qualities are not regarded. The Chinese make letters on the ground of pitch and emphasis, but they are indefinite for us. So it is with sonancy among the Finns and Polynesians. It is not a point which they notice, *p* or *b* is all one to them, since the lips move in the same way.

Beginning with a language in which *t*, *d*, *dh* are indefinite, it is possible to imagine the speakers of it growing to distinguish the different sounds and attach them to different words in such a manner that one tribe should use *t* where a second used *d* and a third *dh*, and so set the spokes in their wheels differently from the first. It might come about in the following fashion: The fact that one man and his village uttered his letters with more sonancy than another would attract attention first in a few striking examples in familiar words. When attention was once awakened to this difference, a sort of shibboleth would be made of it, and it would soon be perceived that there was a difference among words as pronounced by the same man, like this difference made in the same word by different men. The discriminated pronunciation of a considerable number of words would then be rapidly fixed under the guidance of two ideas—first, that the families or tribes are to differ in their pronunciation of each word containing these heretofore indefinite sounds; second, that the words are to differ from each other in the shibboleth sound. An American has only to remember how Irishmen change the sounds of new words which they learn from us, to perceive that these ideas must have been considerable forces in the history of dialects. The working of them out in the case we have supposed, would gradually lead, if we give enough action and reaction between the tribes, to the formation of classes of words in all the dialects, containing the same words in the corresponding classes, but having each word differently pronounced,—a state of facts similar to that in the Sanskrit, Low German, and High German now. This line of thought has been suggested by Professor Max Müller's



famous account of Grimm's Law, and agrees with it in supposing that the mutes now found in Low German and High German are not to be explained as changes from those occurring in the corresponding words in Sanskrit, Greek, or the Parent Speech, but that the three sets are of equal age, and were gradually worked out of an earlier indefinite pronunciation by the influence of each on the others.

A hypothesis which makes the separation of High German from Low German wholly coördinate with that of Low German from Sanskrit, and of so high antiquity, is hardly credible on general historical grounds, aside from the linguistic difficulty of so complex a movement as this threefold simultaneous discrimination supposes. Little, if any, notable assent has been given to the doctrine of the primæval separation of Low German from High German, or indeed to any such views as those last set forth.

Mr. Sweet, at any rate, accepts the Low German letters as a change from those of the Parent Speech, and the Low German change as prior to the High German. He also accepts the current view of the sounds of the letters in the Parent Speech, and believes that the Low German sonants come from the aspirates *dH*, *bH*, *gH*. He agrees also that the three sets of letters in the Parent Speech have never been mingled, and that when, e. g., the old *d*'s changed to *t*'s, the old *t*'s must have changed to some other letter. But instead of the wheel movement, he supposes a criss-cross, an interchange; *t* and *d* exchange places; when *t* goes to *d*, *d* goes to *t*, and *dH* remains unchanged. His scheme for the linguals is as follows :

Parent Speech	<i>t, d, dH,</i>	change to
Oldest Teutonic	<i>d, t, dH,</i>	which change to
Oldest Low German	<i>dh, t, d,</i>	which change to
Oldest High German	<i>d, tH, d, t.</i>	

What is called Oldest Teutonic is not found in any documents, but is a hypothetical Teutonic Parent Speech, made out by Mr. Sweet on the ground of the probability of the changes, and supported, as he thinks, by certain facts in Gothic and Anglo-Saxon.

We will first examine the theoretical probability of the changes.

1. The starting point of difference between this scheme and that of Grimm or Curtius, is in the changes of the original *t*. This they suppose to change to *tH*, *th*, the last being the sound which we know it to have in English, and which they suppose it to have had in Gothic. Mr. Sweet gets from the known *t* in Parent Speech to the known *th* in English by inserting two doubtful steps, his *t* changes to *d*, then to *dh*, then to *th*. It is plain that Sweet's hypothesis is theoretically the less probable. The change of *t* to *th* is a natural weakening and presents no difficulties whatever. It is true that it is not so common as the change of *d* to *dh*. The sonant mutes have an incipient vowel murmur which makes it more common for them than for surds to relax the closeness of their stop, and so change into spirants. We know no changes of surd mutes to their spirants so wide spread as that of the Greek  $\delta$ , now always *dh*, and the similar changes in Spanish and Danish. Sweet's change from *t* to *d* is also a common weakening, so that his run from *t* to *d* and from *d* to *dh* is easier than Grimm's from *t* to *th*; but it is a fatal facility, which carries him beyond his proper stopping place at *th*. To rise from *dh* to *th* is against the laws, and makes the whole hypothesis in so far improbable. It may be said that we have *dh* also in the English pronouns, and elsewhere, and that Grimm's explanation of that must be compared with Sweet's explanation of *th*. We have then to compare Grimm's series *t*, *th*, *dh*, with Sweet's series *t*, *d*, *dh*, *th*, where the first is all regular weakening, and the last has to rise from *dh* to *th* against law. It should be added that any difficulty with a change from *t* to *tH* is removed for Mr. Sweet by his admitting it to form part of a similar system of changes,—that from Low German to High German.

2. The real difficulty in Grimm's Law, the change of sonants to surds, of *d* to *t*, is not only not removed, but heightened tenfold by supposing it to occur at the same time as a change from *t* to *d*. Such interchanges when made by individuals belong to morbid speech, to aphasia. It is doubtful if any

real example of it is to be found in the speech of a nation. Mr. Sweet compares it to the cockney's *h*'s. The facts about that are not well known. Mr. Ellis seems to be at a loss about it. That *h* is easily dropt is well known. That persons who generally drop it should sometimes sound it, and that in the wrong place, is not strange, and perhaps that is all there is in the matter. The Armenian is also sometimes said to have interchanged two sounds since the early period; but such a change can be believed only on the strongest evidence, and perhaps only when mediated by other changes. Careless or unskilled hearers sometimes mishear strange sounds into these interchanges. English Americans here say that Germans pronounce *w* as *v* and *v* as *w*. The German *w* (*bh*) has not the semi-vowel sonancy by which we recognize *w*, and when they pronounce an English word containing *w*, it sounds strange, and we emphasize the strangeness unduly, and say that they make a *v*. The same German sound (*bh*), when made for *v* in an English word, is strange there too. The German makes it by closing with his upper lip, instead of his upper teeth. But the sound of the teeth is the characteristic quality of *v* to us, and so we say that he makes a *w* for *v*. And it is true that such a mishearing might possibly lead to a real interchange of letters.

3. The putting off the change from *dH* to *d* till the Low German period is improbable and unhistoric; improbable because, as has before been pointed out, *dH* is so difficult a combination to utter and therefore so likely to be unstable; unhistorical because we know that this combination actually gave way so early all through the Indo-European tongues as to antedate our earliest memorials in every tongue but the Sanskrit.

4. An examination of the supposed changes to High German does not add to the probability of the scheme. The High German *d* is reached by going first from *t* to *d* then to *dh*, then back again to *d*. The advancing backwards has a paradoxical air, which Grimm's *t* to *th* to *dh* to *d* is free from.

It would seem therefore that Mr. Sweet's theory is inferior in theoretical simplicity and antecedent probability, and would

never have been put forward, or perhaps seriously entertained, if the facts had not seemed to Mr. Sweet to necessitate some such hypothesis. We will now look at these facts.

They mainly relate to the earliest form of the lingual spirant as it appears in Gothic and Anglo-Saxon, and they serve to convince Mr. Sweet that it was one uniform sonant *dh*. His real reliance is, probably, on the appearances in Anglo-Saxon, but he begins with the Gothic. There, he says, "the thorn (*p*) is uniformly represented by one simple character taken from the old Runic alphabet. This fact, taken in connection with the remarkable accuracy of Ulphilas's alphabet, makes it probable that the sound was also simple and uniform: either *th* or *dh*. A strong argument in favor of the latter pronunciation is afforded by the frequent and, in many cases, apparently arbitrary change between this *p* and *d* in the middle and at the end of words." Mr. Sweet, here as elsewhere, deals with facts in an off-hand fashion, which is natural for a busy man who is very familiar with the subject, but which makes things appear much more plainly on his side than they really are. Ulphilas has a character for a lingual spirant. It looks very much like a Greek  $\psi$ , which some of the students of such matters think it is; but it may be a rune. Ulphilas's alphabet is a very commendable effort in a phonetic way, considering where, when, and by whom it was made; but it is bold indeed to say that any one knows enough about its real accuracy to offer any assurance that it would have distinguished the two sounds of our English *th*. Eminent phonologists dispute about the value of nearly every character in it. Moreover, it is by no means agreed that his  $\psi$  is the only character he uses for a lingual spirant. It is a common opinion that the Greek  $\delta$  had already begun at least to have the pronunciation of the sonant spirant *dh*, and that Ulphilas, like the Greeks, used one character, his *d*, for both the mute and spirant; so that, according to this view, the changes between *p* and *d*, are similar to the changes between the two sounds of the English *th*. And then again the fact that there are presumptions in favor of a sonant sound of *p* in the middle and end of words and not at the beginning, instead of being

an argument of any strength in favor of a sonant sound everywhere, affords a strong presumption against it, as we shall see.

There are a considerable number of words in which Teutonic *d* appears for *t* of the Parent Speech, instead of the regular *th* or *dh*. This *d*, Mr. Sweet tells us, is the original sound. He gives no proof. There is strong evidence of the contrary. The examples have been collected by Lottner in his well-known article on the exceptions to the first *Lautverschiebung*, in Kuhn's *Zeitschrift*, XI. 161, and it appears:

1. That many words which have *d* in Anglo-Saxon or later dialects have the regular spirant in Gothic, while the cases are very rare and doubtful in which a *d* is found in Gothic and a spirant in Anglo-Saxon or later dialects. This fact needs no comment.

2. Such *d*'s are found in the middle or at the end of words, and often in connection with sonant liquids, *l*, *r*, or *n*; they are not found initial, unless, possibly, in two or three words in connection with a sonant liquid: Latin *traho*, Gothic *dragan*, drag; perhaps *τρέπω*, *drive*. It is plain that being in the middle of a word, between two vowels, will have a tendency to convert surds into sonants.

This vowel assimilation is familiar in English and elsewhere in the change of *s* to the sound of *z*, as in *houses* from *house*; and of *th* to the sound of *dh*, as in *heathen* from *heath*. The same position has also an obvious tendency to convert mutes into spirants. The spirant differs from its mute by not closing the organs to so tight a stop. Vowel assimilation works just that effect. In modern Danish and Icelandic, *d* medial and final is regularly pronounced *dh*. Mr. Sweet's hypothesis begins with *d* everywhere, initial, medial, and final; and then supposes that the initial *d*'s changed to *dh* while the medial and final remained mute. Surely that is all wrong. If there is any going to sonant spirants, the place for it is the medial and final. The old hypothesis which supposes the surd aspirate or spirant *th* to be the original letter, and this to be changed to the sonant *dh*, *d* in the middle or end of words by vowel assimilation, has law on its side. It is also strongly supported by a set of changes in the inflection of the Anglo-Saxon verb.

The verb *cwæð* (p) is inflected: singular *cwæð*, *cwêde*, *cwæð*, plural *cwêdon*; the verb *waes* has singular *wæs*, *wêre* *wæs*, plural *wêron*; and other verbs the like; where it is plain that the change of *ð* (p) to *d* is analogous to that of *s* to *r*, a surd to a sonant by vowel assimilation.

In Latin also there are similar adjustments of letters; the original *dH*, *th* appears as *f* initial, but as *d* medial; and so with *h* initial and *g* medial. As to which the probable theory (Ascoli, *Corsi di Glottologia*, I. 171) is that *dH* first became surd as in Greek, and then softened to the sonant when medial. Curtius also gives examples of media from aspirates in Greek, *Grundzüge*, 461, 468.

Again there are in Gothic some words in which *d* and p vary. This occurs in words whose proper letter is *d*, which regularly changes to p when final or before *s* in inflection. In the combination *ps*, p must be surd like *s*. Ulphilas has a separate character (*z*) for the sonant of *s*. In some other words there is varying spelling; perhaps there was varying pronunciation, but it is true that the spelling shows that *d* and p were probably sometimes used for like sounds.

In modern English we have some exact knowledge to reason from; *th* is generally surd when initial and often when final, and sonant when medial. The natural weakening is from surd to sonant. That our surds are changed from sonants, though not impossible, needs the best evidence before it can be received. Here Mr. Sweet's studies of the Anglo-Saxon manuscripts come to the front. It had been the current notion that the confusion of *ð* and p in the best known manuscripts was due to late and careless scribes, and that if we could get really old and really careful manuscripts, we should find the letters uniformly discriminated. Mr. Sweet has been studying manuscripts carefully written for Alfred, and others of equal or nearly equal antiquity and authority, and finds that each uses a single character, one *ð*, another p. He naturally, and confidently (and that is natural too) concludes that there was only one sound. That this sound was *dʰ* seems to have been impressed on him most by the shape of the written characters. One of them (*ð*) is obviously a crossed *d*. The other (p) is

a rune, and Mr. Vigfússon's theory about it is, that it is a Latin *D* with the stem prolonged both ways. He thinks the runic sign for *d* was made by joining two *D*'s back to back. Mr. Sweet accepts the suggestion of these forms, i. e. that original *t* was then pronounced *d*, and original *dH* as double-*d*. That comes pretty near being a merger of the two sets of letters. One would hardly expect *d* and double-*d* to have separate characters. But there is some weight in these suggestions. Exactly how much, I do not know enough about the history of alphabets to say. But the history of opinions about runes and Gothic characters and Anglo-Saxon characters is such, that even Mr. Sweet's conclusions about the matter do not much win my confidence—that plant of slow growth. To speak right out, Mr. Sweet's statements about the Anglo-Saxon manuscripts lack something of completeness. It would be comfortable to know exactly how many and what manuscripts use *ḁ* alone, and *p* alone, and how many and what have both. The two Pastoral manuscripts are mentioned as using *ḁ* alone, the Parker manuscript of the Chronicle is mentioned as using *p* alone. The Lauderdale Orosius shows both. These are all Alfred manuscripts, and here the specification ends. "The more accurate of the later MSS.," it is added, "generally write *p* initially and *ḁ* medially." Mr. Sweet cannot really expect any one to rate this graphic evidence very high till it is much more fully set forth. A more solid source of evidence is found in words where these characters appear in combination with other consonant symbols, or change to other letters. Mr. Sweet says, "In the very oldest MSS. the words which have *d*, *b*, and *g*, instead of the later *ḁ*, *f*, and *h*, are so numerous, that we are almost forced to the conclusion that at a period not much earlier than the beginning of the eighth century, the sounds represented by *ḁ*, *f*, and *h* did not occur anywhere but initially." To this it may be said, first, that Mr. Sweet should state more definitely what manuscripts he counts as these very oldest. Does he mean a few scraps like the nine-line fragment of Caedmon? Then suppose it be admitted that at the beginning of the eighth century it is the common rule to find in place of the surds *t*, *p*, *k*, initial spirants, and

medial sonant mutes, the question arises which is more probable, that there were at first sonant mutes everywhere and that they have changed to sonant spirants when initial, or that there were at first surd spirants everywhere which have changed to sonants when medial. We have already pointed out that sonant spirants would be most likely to appear in the middle and not at the beginning of words. (See over, p. 91.) It may be said further that we have plenty of carefully written Low German a good deal earlier than the eighth century—the Gothic of Ulphilas of the fourth century—and so far from its being all medial *d*'s, there are more medial spirants than in Anglo-Saxon. To accept *d* as the original letter is to place the Gothic latest of the languages. Mr. Sweet's suggestion makes the Anglo-Saxon of the period a little before the eighth century indefinitely more primitive in its consonant system than the Gothic of the fourth and, it may be pretty safely added, than the general Teutonic status of the fourth. For we get to High German from *t*, according to Mr. Sweet, through *d*, *dh*, to *đ*; and High German had already reached the second *d*, at or about the time that he places Anglo-Saxon at the first one. That Anglo-Saxon is not such a primitive speech in most respects is certain, that it is so in this respect is antecedently very improbable. So much for Mr. Sweet's hypothetical *d*.

Now for the question whether the manuscripts of Alfred's time establish one only uniform sonant spirant (*dh*).

Mr. Sweet's scheme is :

	Initial.	Medial.	Final.
Before 8th century,	<i>dh</i> ,	<i>d</i> ,	<i>d</i> .
Alfred's reign,	<i>dh</i> ,	<i>dh</i> ,	<i>dh</i> .
Later Anglo-Saxon,	<i>th</i> , <i>dh</i> ,	<i>dh</i> ,	<i>dh</i> .
Modern English,	<i>th</i> , <i>dh</i> ,	<i>dh</i> ,	<i>th</i> .

But the laws of utterance make it certain that there was a surd spirant in the time of Alfred. The *đ* (p) occurs in combinations where it must have been surd. The third personal ending of the verb is found abundantly in syncopated forms after surds: such are *drinedđ*, drinketh; *crypdđ*, creepeth, and the like. A sonant spirant never was pronounced in these



combinations. Mr. Sweet himself, on page 501, has his little thrust at the want of capacity of "modern critical editors, who do not stop to consider whether their 'normalized' *spricē* *pirsē* (-skdh), &c., are phonetically possible or not." But there are plenty of them in his text. To these regular examples may be added as somewhat peculiar, those in which a *t* remains, as *restē* (resteth), or is inserted, as *gecistē* (chooseth), *geristē* from *gerisan*; where the surd sound is certain, though the inserted *t* may be fairly said to testify that final *ē* was often sonant.

Another frequent combination in these manuscripts that Mr. Sweet has published, is *sē*, as in the second person of verbs, *têlde sē*, blamedst; in superlatives, and elsewhere, abundantly. Mr. Sweet describes it at length as one of the most noteworthy objects in his text and admits it fully to be a voiceless or surd *th*. There was then a surd spirant in the time of Alfred represented by *ē*, *p*.

There are several conditions in which the common *ē* is changed to another letter, which seem to offer clear proof that *ē* (*p*) was surd: *bit* for *bide ē*, *bint* for *bide ē*, *tret* for *tred ē*, and the like, strongly imply a surd *ē*. How else should a surd *t* arise from *dē*?

Indeed in this manuscript we find an uncontracted *-et* not infrequent for *-ē*: *dyne cet* for *dyne ē*, thinketh, and see other examples on p. xxxiv. This evidently is to be put with the syncopated changes just mentioned, and these with the Gothic law of final combinations, and so the surd character of the *ē* is grounded in the depths of Old Low German (March's Comparative Grammar of the Ang. Saxon, p. 97). It is a little remarkable, in view of Mr. Sweet's special advocacy of this uniform sonancy, that his manuscripts show so many facts which contradict it, or look the other way, and not one which favors it, except the uniform sign *ē*. Thus there are no examples in them of irregular medial *d* for *ē*, no verbs ending in *-ed* for *-ē*, no irregular examples of syncopated verbs with other sonants for *ē*, or anything of the kind. The special forms are all against uniform or predominant sonancy. Mr. Sweet, to be sure, gives syncopated *-ed* as one of his verb

endings; but the examples are simply dropt *ð*'s after roots ending in *d*: *gewend* from *gewendan*, *gefrêd* from *gefrêdan*, p. xxxiv.

It appears then that Mr. Sweet's deductions from the uniform sign *ð* in his manuscript were hasty. The phonetic laws show that there were both surd and sonant spirants. Put this fact with that of the uniform sign, and it becomes nearly certain that the early scribes did not distinguish the surd and sonant sounds, any more than our scribes now do in English. The same was true of *f* and *s*. The spirants are from their mode of formation especially sensitive to the influence of other letters,—of the vowels, because they are a sort of incipient vowels, and of other consonants, because they do not wholly stop the breath, and can readily combine with other sounds. In most languages we find their spirants oftener sonant between vowels than at the beginning of words. The difference between the surd and sonant sounds of any spirant is slight compared with that between the surd and sonant sounds of a mute. The spirant never has the sharp closure of the mute surd. Hence most languages have not distinguished the surd and sonant sounds of the spirants so carefully as those of the mutes; *s* is the most universal spirant, and one character for it generally does duty both as a surd and a sonant consonant, so does *th* in English, so did *f* in Anglo-Saxon, and so did thorn in Gothic and Anglo-Saxon.

That this thorn began predominantly surd and has been changed to sonant by vowel assimilation in the middle and often at the end of words appears from the following facts now briefly recapitulated:

1. Gothic *p* and Greek *θ* transliterate.
2. The Gothic change from *d* to *p* before *s* indicates a surd *p*.
3. In the transliteration of Gothic names into Latin, we have at first *th* for *p*, then gradually *t* comes to be used at the beginning, *d* in the middle of the names.
4. The earliest Ang.-Sax. MSS. represent the spirant by *th* as they do the Greek theta.
5. They also show a difference between initial and medial

positions by the uniform spirant initial, the frequent sonant mute sign medial.

6. Frequent Ang.-Sax. combinations of letters, e. g. *sđ*, *stđ*, *cđ*, *pđ*, indicate a surd *đ*: and so do the results of several phonetic changes where *đ* gives rise to *t*.

7. In a large part of the good Ang.-Sax. MSS. there is a visible inclination to use a different character (*p*) at the beginning of words from that (*đ*) used in the middle and at the end.

8. The English language uses surd *th* initial, sonant *th* medial and often final, with certain exceptions—mostly pronouns and inflection endings which have a peculiar history.

9. The place for a sonant spirant to first appear is in the middle of words, not at the beginning as Mr. Sweet's theory would have it.

The other sets of letters go with the linguals. Mr. Sweet says in his summary way, "There can be no doubt that the *f* was originally vocal in all cases, like the Welsh *f*." When one observes the facts in Gothic expressed by the rules, "*p* before *t* changes to *f*," and "*b* before *t* changes to *f*," and observes that *ft* and *fs* are common combinations, he will be sure that *f* was not vocal in all cases in the oldest Germanic speech of which we have any direct knowledge. An examination of the whole matter gives a series of facts generally similar to those set forth in regard to *th*, *dh*, and has heretofore satisfied the ablest philologists and phonologists that *f* was originally surd, nor is any reason obvious why it should not do so in the future.

Our study of the theoretical simplicity and probability of Mr. Sweet's criss-cross hypothesis for Grimm's Law led to the conclusion that its difficulties were so great that he must have been driven to it by some supposed compulsion from the facts. Our study of the facts leads to the conclusion that they are irreconcilable with his hypothesis about the original uniform sonant spirant; but if that be given up, his whole hypothesis about Grimm's Law is objectless and baseless.

Meantime there has been within the last few years in Germany a constant succession of essays on the *Lautverschiebung*.

As the study of living speech in physiology and in the dialects begins to bear fruit, each of the new men naturally has his word to say about the great German linguistic problem, or some of its corollaries ; oftenest, of course, about the relations of High German and Low German, which are both still alive.

In the first setting forth of Grimm's Law it was said that the Low German and Scandinavian tongues remained in the state to which a single application of the law to the Parent Speech would bring them, while High German repeated the operation. The High German letters are said to bear the same relation to the Low German, that the Low German bear to the Sanskrit.

A closer examination of the facts shows a large number of exceptions to this rule. Indeed, if the prevailing forms in Old High German be accepted as Old High German, only the linguals *t*, *d*, *th* answer to the law. The other letters under the law are unchanged, except that *k* changes to *ch*.

It is to be noticed, however, that a part of the ancient documents (7-11 century) write surd mutes for all the sonant, i. e. *k* for *g*, *p* for *b* as well as *t* for *d*. According to Graff's examination of them, 8 write *k* alone ; 150 mingle *k* and *g* without rule ; and 110, including Isidor, Otfried, Tatian, Williram, have exclusively *g* ; 39 have *p* for *b*, all glossaries and fragmentary except 3 ; 49 retain the old *b* throughout ; all the rest mingle *p* and *b* without rule. A closer examination shows a geographical ground of classification. The writers bordering on Low German retain the old letters. The *Oberdeutsch* have the surds in their earliest writings, and the traditional pronunciation of the region is still the same. We may therefore infer that the cause or causes which produce the Grimm's-Law changes were really at work, but the influence of the Low Germans finally carried the day in the literary and court speech. Grimm, *Geschichte d. S.*, 424. The aspirates or spirants only do not change, *h* and *f* remain the same. This bears hard on the theory of Curtius that the force which turns the wheel of sounds is the gravitation of aspirates. There is certainly no such force in the High German shifting of labials and gutturals.

The minute study of the physiology of speech, and of living dialects, has led to the making of distinctions among sounds much finer than have been recorded in any alphabet. These minuter distinctions enable the phonologists to break up Grimm's wheel; they show how sounds may be kept separate which would be mingled, so far as the Roman letters go. There are, for example, different degrees of sonancy given to *d, b, g* in different parts of Germany; so, too, the stress or volume of breath with which the surd *t, p, k* are uttered varies much. Americans who live in regions settled by Germans are continually made aware of these facts. There is so little sonancy in the common German *d, b, g*, that they sound to us like *t, p, k*. I have just now, while writing about this thing, given my German American neighbor an order for a *peck* of grass seed, and I find it is a *bag* that he wants. These sonants of little or no sonancy are called whispered letters. We notice that *k* has a peculiar sound, and on attending to it, we hear or seem to hear *kH*. If *d* were to move to *t* in this way by dropping sonancy, it would still be distinct from the old *t* with stress, so that we should not need the wheel hypothesis to keep them apart. Some of the later Germans have accordingly dropt it, and advanced theories explaining the changes as having taken place independently and even at different times. Of these, one of the most lively, and suggestive, and many-sided and provoking, physiological, psychological, and poetical as it is, is that of William Scherer in his *Zur Geschichte der deutschen Sprache*. The chief source of the peculiarities of German speech, he thinks, is to be found in the change which the social conditions after the occupation of Germany brought about. These raised passion, the heroic ardor of the warrior, to a dominant energy. This led the poets, the creators and shapers of speech, to aim at emphasis and passionate strokes. Hence alliteration; hence also a change in the nature of accent from pitch to stress. Feeling is expressed in the vowel sounds. Hence arose a finer modulation of the vowels and more stress upon them. But more stress on the accented vowels implies less on the consonants, and lightening the consonants is the essence of

the *Lautverschiebung*: it weakens surds to spirants, spirants to sonants, sonants to whispered letters. The change from whispered letters to true surds he attributes to alliteration. This preserves the old distinctions among initial sounds and even augments them. A part of the growing stress was led to this form of utterance by the attention being so much drawn to initial letters by their use on the lots employed in divination.

The cause of the second or High-German shifting he finds in Romanic influence on the High Germans, especially in the influence of the folk poesis and church hymns on the poets and poetical forms of the High Germans. He does not work out the particular applications of this thought. He goes fully into proximate physiological causes, not only of the general movements, but of the exceptions.

He begins with the *surd mutes*, and gives the following rules for them: Initial and after liquids they change to surd affricata, i. e.,

<i>p</i> ,	<i>t</i> ,	<i>k</i> ,	change to
<i>pf</i> ,	<i>ts</i> ,	<i>kh</i> .	

Between vowels they shift to surd spirants:

<i>p</i> ,	<i>t</i> ,	<i>k</i> ,	change to
<i>f</i> ,	<i>zs</i> ,	<i>hh</i> .	

Next the *spirants*. These should go to sonant mutes, and only those could go which had become sonant at the time of the general shifting. The lingual alone was ready, *th* having become *dh*, and it alone shifted to *d*. Why it had become sonant he does not know, but he compares it with the change of *s* to *z* in English. Last the *sonant mutes*. These, he thinks, changed by dropping their sonancy; the real sound became a whispered sonant rather than a true surd. The labials and gutturals had no well-uttered sonant and so needed to make no change to distinguish the whispered one from it. But in the lingual series a full sonant arose from *dh* and appropriated the character *d*, and then the whispered *d* was denoted by *t*.

These movements he regards as independent. His attempt at a solution of Grimm's Law is by explaining each movement as a natural weakening. The combination he leaves to chance.

And the problem is still unsolved. We are interested in the subtle analysis which brings out increments of motion slighter than letters had recorded, but, after all, the letters do move in different directions on the line of easy utterance. The letters have a different history here from that which is found elsewhere, and the repetition of shifting makes a plain demand for some permanent forces to explain it. What is wanted is to postulate some peculiar tendency in this speech which, when acting together with the general laws, will, in the known conditions of the German letters, give resultants at every step of the history such as we find to have in fact appeared. This is what Curtius has attempted by postulating a special German tendency to preserve all distinctions in speech. The attempt to combine this tendency with the regular weakenings so as to make the sounds change places like the turning of a wheel, lifting up one set of spokes by the weight of the others, has much the effect of tracing the power in some ingenious machine for producing perpetual motion. But the working of Grimm's Law does not leave the same sounds in existence. When a second shifting has been carried out, as in the *Oberdeutsch* dialects, the aspect of the tongue is changed. There is but one sonant left of the original six, and that comes by good luck from a superfluous change of *th* to *dh*. There seems to be wanted as the postulate a tendency to some change in the kind of sounds. And if we proceed in Newton's manner, framing no hypothesis, but generalizing a fact and treating it as a power, the postulate is before us, that the Germans have a special tendency to give up sonant consonants. To establish this as a power, we need to see if we can find proof of it, outside of the facts from which we took it, and then define with scientific precision the modes or laws of its working, and its historical development. As to facts, an American may convince himself at any time that Germans habitually use less sonant breath than he does in making what is intended to be the same letter. In trying to pronounce English, the German seems at first to convert each letter according to Grimm's Law : a closer observation shows that he uses less sonant and more surd breath, and that his *t*

and *d* are distinguished to the ear, not by sonancy and the want of it, but rather by different volumes of surd breath. It is well known to students of these matters what difficulty the great German scholars have about accepting sonancy as the distinctive quality of what they call medial, or soft letters.

As might be expected from these statements, many persons and even dialects in Germany never distinguish the surd from the sonant mutes. The manuscripts show that it has always been so. And, in particular, the facts on this point given from Graff, on page 98, show that before the establishment in the schools of the second *Lautverschiebung*, there was general confusion among the High Germans as to surds and sonants. Our train of thought suggests that this confusion is a condition towards which the German tends more strongly than other Indo-European races: there are outlying races who have no sense of this distinction. How then can the *Lautverschiebung* be explained? I ventured the suggestion in my Anglo-Saxon Grammar that it may be a matter of foreign influence. This also was a generalization of a case where we know it to occur, that in which an Englishman undertakes to represent a German's pronunciation of English. According to this thought the typical German, left to the operation of the tendency against sonants, falls, or rises, into a state in which the old surds and sonants are distinguished by different distinctness. When he now comes in contact with other nations who have retained the old utterance of the surds and sonants, they hear his unsonant sonants as simple surds, and his vigorous old surds as aspirated surds, and pronounce his sonant aspirates or spirants as simple sonants. From some historical reason he is educated by them and accepts their interpretation of his speech. The whole of the German tribes thus raised themselves by early collision with the Europeans. The old High Germans, settled for a long time out of reach, passed again from the Low German position into the confused condition in which they are found in our earliest manuscripts, and a second time attained the old discrimination, so far as they have attained it at all, under the joint influence of the Romans and Low Germans.